

**Date: May 6, 2011**  
**Patrick Bayou Federal Superfund Site**  
**TCEQ Final Comments on the Draft Upstream**  
**Patrick Bayou Characterization Sampling and**  
**Analysis Plan from Project Manager, Danielle**  
**Sattman**

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The TCEQ comments are based on the EPA document entitled, *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, OWSER Directive 9355.3-01, October 1988 (EPA Guidance).

The TCEQ review of the Draft Upstream Patrick Bayou Characterization Sampling and Analysis Plan (SAP) is limited in scope due to the allotted time frame. The TCEQ conducted a cursory review of the SAP, the additional investigative reports and data.

- 1) It was identified in the SAP that the COPCs at the Site have historically accumulated in soft sediments. In addition, it is identified that the grab sediment samples will be collected in areas identified from sediment probing in upstream areas of the Site between PB66 and PB101.
  - a) If preferred sediment sample conditions (soft sediment accumulations that have a thickness of 10cm or more) cannot be found throughout the areas of the Site between PB66 and PB101 will the sampling crews still collect sediment samples throughout the areas of PB66 and PB101 to characterize the COPCs in the sediments of the upstream areas of the Site?
- 2) It is identified in the SAP that up to 36 sediment grab samples will be collected.
  - a) What will be the minimum number of sediment grab samples collected? Will the minimum number of samples be able to characterize the distribution of the COPCs in the sediments?
- 3) It is identified in the SAP that the results of the immunoassay testing will be used to identify specific samples for additional laboratory analysis (PAHs and PCB Aroclors) of the grab sample sediments.
  - a) Why will only PAHs and PCB Aroclors be analyzed? Will there be future testing on the samples for additional COPCs?
- 4) It is identified in the SAP that four surface water samples will be collected from the upstream portion of Patrick Bayou between stations PB066 and PB101.
  - a) Will the sample size be able to characterize the distribution of the COPCs in the surface water?

# TCEQ Interoffice Memorandum

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**To:** Danielle Sattman Soule, Project Manager, Superfund Section, Remediation Division

**From:** Vickie Reat, Technical Support Section, Remediation Division

**Date:** May 5, 2011

**Subject:** Draft Upstream Patrick Bayou Characterization  
Sampling and Analysis Plan (SAP)  
Patrick Bayou Superfund Site Remedial Investigation  
Deer Park, Texas  
March 2011

Per your request, I have reviewed the subject document. This memo also reflects input from Dr. Linda Broach of the TCEQ Region 12 office. My comments are outlined below.

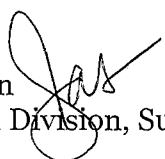
1. 1.0 Introduction and Purpose - This SAP describes the rationale, objectives, study design, and methods for the characterization of the sediments in the upstream portion of the Patrick Bayou Superfund Site (Site; Stations PBO66 to PB101), and culverts that run underneath State Highway (SH) 225, just upstream of the Site boundary. Are there any plans to sample the underground portion of the bayou between SH 225 and PB101? Why or why not? If not, are there any reasons that may trigger sampling at these "more" upstream areas?
2. 2.0 Previous Results, Study Objectives, and Design - Upon review of the May 2010 sediment and surface water report, it appears that the sediment data in Appendix A1 lacks sample results for stations upstream of PBO37. This appendix (in the 2010 report) should be revised to reflect the entire data set for the data from samples collected in 2009.
3. 2.0 Previous Results, Study Objectives, and Design - It appears that the units for the PCBs in surface water should be in ng/L rather than ug/L (first full paragraph following the bullets on page 3).
4. 3.1.1 Sediment Probing Sample Locations and Frequency - Station PBO66 to Station PB101 and 3.2.2 Target Analyte List - Box Culverts - According to the SAP, up to 36 grab samples will be collected from identified soft sediment accumulations that have a thickness of 10 cm or more, to determine the surficial concentrations of total PCBs using immunoassay test kits on-site. Each sample will be split, and six of the split samples will be submitted for off-site laboratory analysis of PCB Aroclors and PAHs. In contrast, the sediment grab samples and core collected from the culverts at SH 225 will be analyzed for PCB congeners. If the PCB analyses differ, how can the JDG reliably compare the downstream/upstream results?

Re: Draft Upstream Patrick Bayou Characterization SAP; Patrick Bayou  
Superfund Site

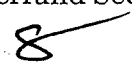
5. 3.2 Experimental Design – Box Culvert Sediment Sampling - According to the SAP, sediment samples will be collected at the upstream end of the box culverts that run underneath SH 225. TCEQ suggests that the JDG also collect sediment samples from the downstream end of each culvert. These samples should all be analyzed for the same analytes planned for the upstream end. These results should indicate if any of the specific culverts are problematic and need further evaluation.
6. 3.2.1 Sample Locations and Frequency - Box Culverts - Will the four culvert samples be processed as discrete samples or will they be composited?
7. 5.6.1 Sediment Probing and 5.6.2 Surface Sediment Sampling - According to the SAP, up to 36 grab samples will be collected and tested where soft sediment accumulation thicknesses are 10 cm or greater. Bank sediments should be avoided when probing for sediments to sample. If the sampling personnel only probe from the shoreline, it is likely that only bank sediments will be encountered. The bank sediments are not depositional.

# Texas Commission on Environmental Quality

## INTEROFFICE MEMORANDUM

**To:** Dani Sattman   
Remediation Division, Superfund Section

**Date:** May 5, 2011

**From:** Charles D. Stone, P.G., P.E.   
Remediation Division, Technical Support Section

**Subject:** Technical Review: *Draft Upstream Patrick Bayou Characterization Sampling and Analysis Plan; Patrick Bayou Superfund Site Remedial Investigation, Deer Park, Texas, March 2011*

Per request, the subject report was evaluated for the purpose of finalizing the current draft. Recommendations follow.

### Sec A Recommendations:

- A.1 Sec 2.2: Since the sampling and analysis plan (SAP) is "... *an extension of the 2009 evaluation* ..." (Sec 2.2, Subject Report) it is, similarly, presumed to contribute to the modeling effort at Patrick Bayou. As such, it is recommended that the section be augmented with a brief description of how these data will supplement the modeling effort.
- A.2 Sec 3.1.2: Based on immunoassay on-site tests, grab samples splits will be selected and sent to lab. On what immunoassay test aspect will such selection be based?
- The number of splits and/or grab samples actually obtained may be adjusted in the field "... *as needed* ..." (pg 8, Subject Report). What are example contingencies that would force an adjustment? Is a downward adjustment possible?
- A.3 Sec 5.6.2: See Item A.2 (above) and revise accordingly.
- A.4 Sec 5.6.2.2: The concentrations of the PCB immunoassay tests will be recorded on an "analytical bench sheet." However, it does not appear that the "analytical bench sheet" is included in the Field Forms to be completed in the subsequent report (Attachment 2, Subject Report). Such data should be included in the associated report.

The anticipated effective detection limit(s) of the PCB immunoassay tests should be included in the subject report – and "analytical bench sheet."